

Name _____

Peppered Moth Simulation

Go to : <http://peppermoths.weebly.com>

Complete your assigned background question(s) using the information from the simulation:

Life Cycle of the Peppered Moth

1. Why are these moths called "peppered moths?"
2. What animals eat the peppered moth?
3. What is a lichen?
4. What do the larvae of the moth eat?
5. How do peppered moths spend the winter?
6. Moths that have more dark spots than the average moth are called what?

My number is:

My answer is :

Impact of Pollution

7. Where was the first black form of the moth found?
8. What was the Industrial Revolution?
9. What was causing the different colors in the moths?
10. What is natural selection?
11. Who suggested that peppered moths were an example of natural selection?
12. What is industrial melanism?

My number is:

My answer is :

Kettlewell's Experiments

13. What is an entomologist?
14. How do scientists test theories?
15. Write down ONE of Kettlewell's predictions.
16. Dark moths were found in what parts of the country?
17. How did Kettlewell directly study the moths?
18. Why did dark moths have a survival advantage?
19. When Kettlewell recaptured the marked moths, what did he find?
20. Where did Kettlewell publish his findings?

My number is :

My answer is :

Conduct the simulation and record your findings:

Birdseye View

21. Open the simulation and play the role of the bird in both the dark and the light forest. Try to behave as a bird would behave, choosing the moths that are the most obvious. At the end of each simulation, record the percent of moths captured in the table below.

	Percent Dark Moths	Percent Light Moths
Light Forest		
Dark Forest		

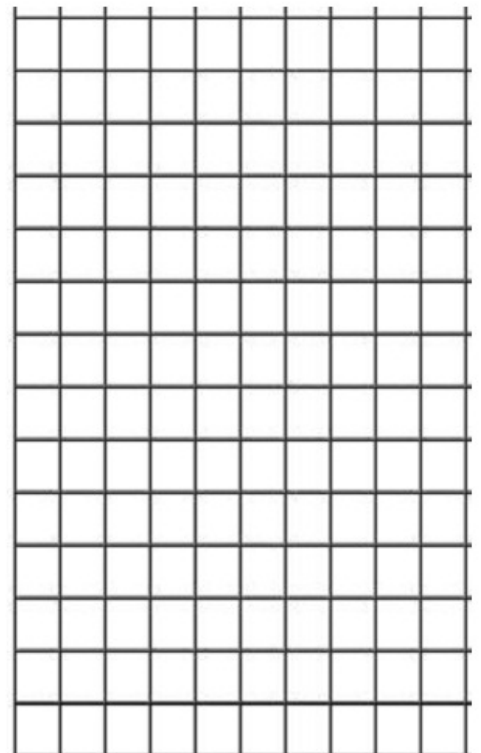
22. Explain how the color of the moths increases or decreases their chances of survival.

23. Explain the concept of "natural selection" using your moths as an example.

24. What would happen if there were no predators in the forest? Would the colors of the moths change over time? Defend your answer?

25. Examine the table and construct a graph. Plot the years of the study on the X-axis, and the number of moths captured on the Y axis. You should have 2 lines on your graph - one for light moths, and one for dark moths.

Year	# of Light Moths Captured	# of Dark Moths Captured
2	537	112
3	484	198
4	392	210
5	246	281
6	225	337
7	193	412
8	147	503
9	84	550
10	56	599



26. Explain in your own words what the graph shows. What type of environment do you think these moths live in?